Using a subset of age matched cases (N=173, means 60 yr.) and controls (N=173, means 59 yr.) between 54 and 66 years of age, the cases had significantly:

Higher homocysteine (9.7 vs. 8.7, P<0.01), and
Lower TC (179 vs. 201, p<0.0001), LDLC (107 vs. 121, p<0.001), triglyceride (140 vs. 163, p<0.05), apoA1 (112 vs. 123, p<0.01) apoB (85 vs. 96, p<0.001), and TC/HDL2b (14.8 vs. 20.2, p<0.05). These data indicate that the cases are more aggressively treated with medications than the controls.

Using a subset of age-matched cases (N=146, mean 55 yr.) and controls (N=93, mean 55 yr.) between 44 and 66 years of age without hyperlipidemia, the cases had:

Higher HDL3b (19.9 vs. 17.9, p<0.05), HDL3 (58.8 vs. 55.7, p=0.08) and LDLII+IV/HDL2+3 (0.40 vs. 0.38, p=0.11), and

Lower TC (182 vs. 205, p<0.001), LDLC (109 vs. 124, p<0.01), HDLC (44 vs. LDL11A (16.8 vs. 18.2, p=0.09), HDL2b (15.5 vs. 18.6, p<0.05), and HDL2 (41.3 vs. 44.5, p=0.06). These data again indicate that cases may be more aggressively treated with medications than the controls, even though they do not have hyperlipidemia. These data also indicate some important risk factors in the cases: a higher ratio of small LDL to HDL, small LDL size and lower HDL2b.
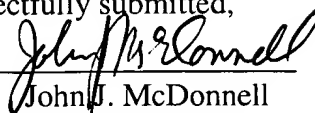
These data illustrate the value of the cardiovascular informatic knowledge base in deriving heretofore unrecognized relationships between data, especially highly discriminating lipoprotein subfractions, in diagnosing risk factors which may govern the treatment of patients.

Applicant has carefully reviewed the references cited by the Examiner and does not find the slightest suggestion that the subclass data can be used to identify patients without hyperlipidemia who are in need of treatment.

Allowance of claim 37 and claims 22-28 and passage of the case to issue are solicited.

Respectfully submitted,

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1.   (Canceled)   A cardiovascular healthcare management system comprising:

(a) an infomediary site having databases for cardiovascular healthcare management;

(b) a data entry interface for receiving patient personal data and test results and storing the data and results in the infomediary site databases;

(c) a diagnostic engine for analyzing patient test results;

(d) a physician data access interface to allow physician access to the infomediary databases; and

(e) a communication system allowing the physician to communicate cardiovascular healthcare management information to the patient.

2.   (Canceled)   The cardiovascular healthcare management system of claim 1 further comprising a cardiovascular knowledge base that stores information related to cardiovascular risk factors.

3.   (Canceled)   The cardiovascular healthcare management system of claim 1 wherein the diagnostic engine includes algorithms for associating test results with possible treatments.

4.   (Canceled)   The cardiovascular healthcare management system of claim 1 wherein the diagnostic engine includes algorithms for associating test results with possible diagnoses.

5.   (Canceled)   The cardiovascular healthcare management system of claim wherein the diagnostic engine includes algorithms for associating diagnosis information with possible treatment plans.

6.   (Canceled)   The cardiovascular healthcare management system of claim 1 wherein the diagnostic engine for comparing patient's test results compares inputted patient LDL subfraction and HDL subfraction values to normal LDL subfraction and HDL subfraction values. .

7.   (Canceled)   The cardiovascular healthcare management system of claim 6 wherein the normal LDL subfraction and HDL subfraction values are determined base in part of the values stored in the infomediary database.

8.   (Canceled)   The cardiovascular healthcare management system of claim 6 wherein the physician dynamically selects parameters for patient test results comparisons.

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9.   (Canceled)   The cardiovascular healthcare management system of claim 1, wherein the patient provides compliance data that is stored in the records for later review by the physician.

10.   (Canceled)   The cardiovascular healthcare management system of claim 1, further comprising a patient access interface whereby the patient accesses a cardiovascular treatment plan.

11.   (Canceled)   The cardiovascular healthcare management system of claim 1, wherein the diagnostic engine analyzes test results and provides suggested diagnoses to the physician.

12.   (Canceled)   The cardiovascular healthcare management system of claim 1, wherein the diagnostic engine analyzes diagnostic information and provides suggested treatment plans.

13.   (Canceled)   A method of managing cardiovascular healthcare information, comprising the steps of:

   (a) storing test result data in a database;

   (b) providing test result data to a physician via a network;

   (c) receiving diagnostic information from a physician via a network;

   (d) receiving treatment plan information from a physician via a network; and

   (e) providing treatment plan information to a patient via a network.

14.   (Canceled)   The method of managing cardiovascular healthcare management system of claim 13, wherein the step of providing test result data is performed using internet protocols.

15.   (Canceled)   The method of managing cardiovascular healthcare management system of claim 13, wherein the step of receiving diagnostic information from a physician is performed using internet protocols.

16.   (Canceled)   The method of managing cardiovascular healthcare management system of claim 13, wherein all the steps of receiving and providing information are performed using internet protocols.

17. (Canceled) The method of managing cardiovascular healthcare management system of claim 13, further comprising the steps of analyzing the test result data and providing diagnosis information to the physician.

18. (Canceled) The method of managing cardiovascular healthcare management system of claim 13, further comprising the steps of analyzing the received diagnosis information and providing suggested treatment plan information to the physician.

19. (Canceled) The method of managing cardiovascular healthcare management system of claim 13, further comprising the step of receiving compliance information from a patient.

20. (Canceled) The method of managing cardiovascular healthcare management system of claim 13, further comprising the step of receiving compliance information from a patient.

21. (Canceled) A cardiovascular healthcare management system comprising:

(a) an infomediary site having databases including havingthat include percentage distribution of LDL and HDL subclass particles data derived from laboratory tests wherein the data is included.

(b) a data entry interface for receiving patient personal data and test results and storing the data and results in the infomediary site databases wherein the received test results includes patient percentage distribution of LDL and HDL subclass particles;

(c) a diagnostic engine for analyzing patient personal data and test results; wherein the diagnostic engine compares received patient percentage distribution LDL and HDL subclass particle data to database LDL and HDL subfraction data.with other tests results to generate suggested treatment solutions to the physician.

22. (Currently Amended) The cardiovascular healthcare management system of claim 36 37 further comprising a physician data access interface to allow physician access to the infomediary databases.

23. (Currently Amended) The cardiovascular healthcare management system of claim 36 37 further comprising a communication system allowing the physician to communicate cardiovascular healthcare management information to the patient.

24. (Currently Amended) The cardiovascular healthcare management system of claim 36 37 further comprising a cardiovascular knowledge base that stores information related to cardiovascular risk factors.

25. (Currently Amended) The cardiovascular healthcare management system of claim 36 37 wherein the diagnostic engine includes algorithms for associating test results with possible treatments.

26. (Currently Amended) The cardiovascular healthcare management system of claim 36 37 wherein the diagnostic engine includes algorithms for associating test results with possible diagnoses.

27. (Currently Amended) The cardiovascular healthcare management system of claim 36 37 wherein the diagnostic engine includes algorithms for associating diagnosis information with possible treatment plans.

28. (Previously Presented) The cardiovascular healthcare management system of claim 27 wherein the treatment plans include personalized drugs, diet and exercise suggestions.

29. (Canceled) The cardiovascular healthcare management system of claim 22 wherein the physician dynamically selects parameters for treatment solutions based on patient test results comparisonstrends.

30. (Canceled) The cardiovascular healthcare management system of claim 23, wherein the patient provides compliance data that is stored in the records for later review by the physician.

31. (Canceled) The cardiovascular healthcare management system of claim 29, further comprising a patient access interface whereby the patient accesses a cardiovascular treatment plan and views test results including trends over time..

32. (Canceled) The cardiovascular healthcare management system of claim 22, wherein the diagnostic engine analyzes patient test results and provides suggested diagnoses to the physician.

33. (Canceled) The cardiovascular healthcare management system of claim 22, wherein the diagnostic engine analyzes test result, patient data, diagnostic information and provides suggested treatment plans.

34. (Canceled) The cardiovascular healthcare management system of claim 22, wherein the diagnostic engine analyzes test results, patient data, diagnostic information and provides a baseline determination for ongoing therapy monitoring.

35. (Canceled) A cardiovascular healthcare management system comprising:

(a) an infomediary site having databases for cardiovascular healthcare management which includes a database of test results for the percentage distribution of LDL and HDL subclass particles for cardiovascular patients;

(b) a data entry interface for receiving patient personal data and test results for percentage distribution of LDL and HDL subclass particles and storing the data and results in the infomediary site databases;

(c) a diagnostic engine for analyzing patient test results for percentage distribution of LDL and HDL subclass particles with the percentage distribution of LDL and HDL subclass particle database.

36. (Canceled) A cardiovascular healthcare management system comprising:

(a) an infomediary site having databases for cardiovascular healthcare management which includes a database of test results of amounts of LDL and HDL subclass particles for cardiovascular patients;

(b) a data entry interface for receiving patient personal data and test results for amounts of LDL and HDL subclass particles and storing the data and results in the infomediary site databases;

(c) a diagnostic engine for analyzing patient test results of amounts of LDL and HDL subclass particles with the LDL and HDL subclass particle database and relating such results to cardiovascular risk factors.

37. (New) A cardiovascular healthcare management system comprising:

(a) an infomediary site having databases for cardiovascular healthcare management which includes a database of test results of concentration of subclasses of LDL and subclasses of HDL and LDLC and HDLC from cardiovascular patients;

(b) a data entry interface for receiving patient personal data and test results for concentration of subclass of LDL and subclass of HDL and LDLC and HDLC and storing the data and results in the infomediary site databases;

(c) a diagnostic engine for analyzing patient test results for subclasses of LDL, subclasses of HDL, LDLC and HDLC data and identifying patients who do not have hyperlipidemia but are in need of treatment.